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(54) **FLUID SAMPLING SYSTEM**

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CPC ***E21B 49/084*** (2013.01)

(58) **Field of Classification Search**
CPC E21B 43/12; E21B 43/14; E21B 49/08
See application file for complete search history.

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(57) **ABSTRACT**

A sampling system and a method for sampling fluid from a target zone within a well bore without commingling fluid from other zones in the well. The sampling system includes a hydraulic flow control system and a differential flow logging system. The hydraulic flow control system has a plurality of multi-level, vertically disposed pumps with fluid extraction rates set to generate hydraulic zones above and below a center one of the pumps. The hydraulic zones isolate fluid flow in a target zone surrounding the center pump, and the center pump collects a sample from the isolated target zone without mixing fluid from other zones of the well. The differential logging system has a plurality of flow devices. Each of the plurality of flow devices is disposed near one of the hydraulic zones to monitor vertical flow in the well and confirm isolation of the target zone.

15 Claims, 5 Drawing Sheets